



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,297	07/06/2001	Makoto Yoshida	033211-010	7675

7590 06/29/2005

Ellen Marcie Emas
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

MAGEE, CHRISTOPHER R

ART UNIT	PAPER NUMBER
----------	--------------

2653

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,297

Applicant(s)

YOSHIDA ET AL.

Examiner

Christopher R. Magee

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 15-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/6/01 & 9/21/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-14 in the reply filed on 01/19/2005 is acknowledged.
2. Claims 15-48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/19/2005.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Koshikawa (JP 03-162705).
 - Regarding claims 1-4, 9 and 10, Koshikawa teaches A thin-film magnetic head comprising:

Art Unit: 2653

an inductive write head element including an upper core layer with a front end section magnetically coupling with an upper magnetic pole [16], a lower core layer with a front end section magnetically coil conductor [15] formed coupling with a lower magnetic pole [12], a coil conductor [15] formed to pass between said upper core layer and said lower core layer, and an coil insulation layer [14] for sandwiching said coil conductor; and

at least one thermal diffusion layer [21] with a good thermal conductivity formed on said coil insulation layer [14] at an outside region of said upper core layer, said at least one thermal diffusion layer being in contact with a part of said coil conductor or constituting a part of said coil conductor [Fig. 1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-8 and 11-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Koshikawa (JP 03-162705) in view of Williams et al. (hereinafter Williams) (US 5,949,927).

- Referring to claims 5 and 11, Koshikawa shows all the features, *supra*, except the coating film is made of a material selected from Ti, Cr, Ta, Ni, Fe, Coe Au, Pt, Rh and Ru, or an alloy containing at least Ti, Cr, Ta, Ni, Fe or Co.

Art Unit: 2653

Referring to claims 6, 7, 12 and 13, Koshikawa shows all the features, *supra*, except at least one thermal diffusion layer is made of a material with a thermal conductivity higher or lower than that of Al_2O_3 .

Referring to claims 8 and 14, Koshikawa shows all the features, *supra*, except at least one thermal diffusion layer is made of a material selected from Au, Ag, Is, Zn, Al, Ir, Cd, Sb, W, Ta, Fe, Pb, Ni, Pt, Pd, Mg and Mo, or an alloy containing at least one of Au, Ag, Is, Zn, Al, Ir, Cd, Sb, W, Ta, Fe, Pb, Ni, Pt, Pd, Mg and Mo.

Williams discloses mechanical and thermal properties of various materials used in thin film inductive read-write heads as stress buffers [col. 2, lines 45-58].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the thermal diffusion layer of Koshikawa with various materials as taught by Williams.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to substitute the thermal diffusion layer of Koshikawa with various materials as taught by Williams in order to minimize popcorn noise and domain instability in thin film read-write inductive magnetic recording heads [Williams; col. 2, lines 58-65].

Art Unit: 2653

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is annotated on PTO-892.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (571) 272-7592. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

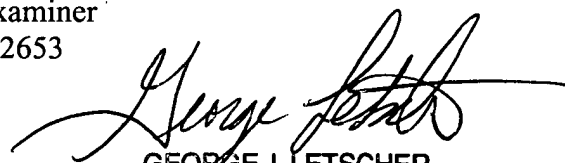
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher R. Magee
Patent Examiner
Art Unit 2653

June 27, 2005
crm



GEORGE J. LETSCHER
PRIMARY EXAMINER